

What claims are claimed:

1. Transmittance detection and a chromatographic test strip are used together in a single or multi-step test to quantitate analytes in biological fluid.
2. The detection system in claim 1 is not limited to transmittance; fluorescence, magnetic field and chemiluminescence, as well as electrochemistry detection principles are extended.
3. The test strip of claim 1 is composed of detection cell, reference cell, flow passages, absorbent portion and strip frame.
4. The detection cell and reference cell in claim 3 are filled with various materials having light transmission properties.
5. The cells of claim 4, the chemical reagent, affinity reagent, antibody, antigen or other proteins are bound to the light transmission materials by simple absorption, covalent or non-covalent chemical binding.
6. The test strip of claim 3, labels used in the testing system can be direct detectable or visible colored particles, metallic sols (colloidal gold), dye sols, charged particles, magnetic particle, fluorophors and colored latex particle.
7. The test strip of claim 3, indirect labels, such as enzymes (alkaline phosphatase and horse radish peroxidase etc.) can be used in combination with enzyme substrates.
8. The test strip of claim 3, various chemical reactions, such as analyte, substrate reaction, enzyme substrate reaction, analyte affinity binding can be used with this strip format.
9. The test strip of claim 3, various immunoassays, such as sandwich assay, competitive assay, and homogenous assay can be conducted with this strip format.

10. The test strip of claim 3 can be horizontal, vertical, or any other position corresponding to the detection system.

11. The test strip of claim 3, its detection cell and reference cells can be in any shape and size to accommodate the requirements of any particular test.

12. The test strip of claim 3, the biological fluid pass through the strip can be generated by gravity, capillary action, wicking, vacuum pump, peristaltic pump or other means.